

Short Education Movies and Demonstration Methods Related to Elementary Student Wound Care Behavior

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ABSTRACT

School-age children are susceptible to injuries that can cause cuts and potentially infection, but children's knowledge of wound care is still lacking. The study aims were to analyze the influence of Short Education Movies (SEMs) and demonstration methods on the wound care of elementary students. The study was quasi-experimental with a control group pre- post-test design. A total of 40 out of 181 elementary students in Peneket and Sidorejo were taken as respondents through simple random sampling. The independent variable was Short Education Movies (SEMs) and demonstration methods. The dependent variables were knowledge, attitude and practical wound care. The data was collected using questionnaires and observations. The data was analyzed using the Wilcoxon signed rank test and the Mann Whitney U Test. The results showed that health education using the SEM and demonstration method can increase the knowledge ($p=0.000$), attitude ($p=0.001$) and practices ($p=0.000$) of the intervention group. The Mann Whitney test in the intervention group and the control group obtained the following results: knowledge ($p=0.002$), attitude ($p=0.000$) and practice ($p=0.000$). The application of SEM and the demonstration method is effective when applied to elementary students because it is easily understood.

Keywords: Short Education Movie, demonstration, injury, wound care

Introduction

A wound is a disruption of normal tissue continuity that is both structural and functional.¹ Wounds can cause infection if not handled properly, so they need the best management from the start. School-age children don't have good knowledge of wound care. The role of school-age children in providing first aid for their wounds greatly determines the continuation of wound healing.

The incidence rate of school-age child injury in northern Sweden is 2,4 per 100 children, with an annual incidence rate of 2,9 per 100 students in Norway.² The incidence rate of injuries in Indonesia was 7,5% in 2007 and this has since increased to 8,2%³. The Central Java province's data about the prevalence of injuries and their causes shows that they are due to accidents by 40,1%,

falling by 42,1%, being exposed to sharp objects by 6,7% and burning by 0,6%.³ The victims of minor injuries in 2015 ranged about 500 and in 2016, this ranged about 450.⁴

The prevalence of the usual causes of injury in school is falling to about 40,9%.³ According to *Pertolongan Pertama untuk Anak Cara-Cara Praktis Menangani Kecelakaan dan Mengatasi Keadaan Darurat*, injuries can cause infection in children of a low socioeconomic status.⁵ The incidence of infection can be prevented by the proper handling and intervention of the injuries. Health education about wound care can be done so then the children can treat any injuries that are experienced independently.⁶

Health education is a form of intervention designed to help individuals and communities to improve their health by increasing their knowledge or by influencing their attitudes and practices.⁷ Learning through different demonstration methods can increase the student's learning motivation.⁸ The learning method conducted using short films can increase creative thinking, strengthen visual understanding, provide an active role for the students and be effective in the wider context

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of the learning process.⁹ According to Piaget, children are at the stage of concrete operational development. They need a real learning situation where the method is used in demonstrations after getting the material using a short movie.¹⁰ However, research on learning using short films or Short Education Movies combined with demonstrations about the care of minor wounds has never existed until now.

The purpose of this study was to determine the effect of Short Education Movies and the demonstration method on the wound care behavior in school-age children.

Method

Study Design, Sampling and Variables: The study was a quasi-experimental pre-test post-test with a control group design. The research was conducted at an elementary school in Peneket and Sidorejo, Center Java. There were 40 out of 181 elementary students in Peneket and Sidorejo taken as the respondents through simple random sampling. The total sample used amounted to 40 respondents, consisting of 20 respondents in the intervention group and 20 respondents in the control group. There were 2 respondents from the control group who dropped out because they did not attend the post-test. The sample criteria consisted of the inclusion criteria, exclusion criteria and drop outs. The inclusion criteria in this study were children who were in the concrete operational stage at the age of 9-11 years. The exclusion criteria were students who did not attend the scheduled meeting, while the drop out criteria consisted of the respondents who did not complete the research activity and who thus resigned as respondents. The independent variable was the Short Education Movie (SEM) and demonstration method. The dependent variables were knowledge, attitude and practice wound care.

Instruments: The knowledge and attitude questionnaire guide was a modification of the Yuliana questionnaire. Observation sheets were used for the practice.¹¹ The tools used were a Short Education Movie in the form of a videos; it also included the tools and materials needed for wound care demonstration and the appropriate leaflets. The Short Education Movie provided contained the steps to treating minor injuries such as abrasions, burns, bruises and the 6 steps of hand washing.

Data Collection: In this study, the researcher used simple random sampling, which is where the researcher chooses the sample by giving an equal opportunity to all members of the population to be determined as a member of the sample. The selection of the respondents was done randomly using a lottery. The choice of the individuals to become members of the sample was really based on chance, in the sense of them all having the same opportunity. The selected students were then given an explanation of the research and they were given an informed consent sheet to ask for approval from their parents.

The study was conducted pre-test and post-test. In all of the groups, the pre-test was carried out by filling out a questionnaire on their knowledge and attitude before then practicing first aid on bruises, abrasions and burns. The intervention group was given health education by looking at the video and then the demonstration was accompanied by the facilitator. The interventions in the intervention group were carried out 2 times. The control group was given a placebo leaflet without any information about wound care or hand washing. Then the post-test was done in both groups in the same way as the pre-test. The study was conducted in December 2018.

Data Analysis: The data was analyzed using the Wilcoxon signed rank test and the Mann Whitney test with the level of significance $\alpha \leq 0,05$.

Results

Table 1: Statistical Results for Knowledge

Knowledge level category	Intervention Group				Control Group			
	Pretest		Posttest		Pretest		Posttest	
	Σ	%	Σ	%	Σ	%	Σ	%
Good	4	20	13	65	3	15	6	30
Enough	10	50	7	35	15	75	12	60
Less	6	30	0	0	2	10	0	0
Total	20	100	20	100	20	100	18	90
Wilcoxon Signed Ranks Test	p = 0.000				p = 0.237			
Mann-Whitney U Test	p = 0.002							

Table 1 showed that there were differences in the knowledge between the intervention and control groups. The results of the Wilcoxon signed rank test in the intervention group showed p-value = 0.000, which means there was a difference in knowledge before and after the intervention. The results of the statistical tests done using the Wilcoxon signed rank test in the control group showed a p-value = 0.237, which means there was no difference in the knowledge before and after giving the placebo leaflet. The Mann Whitney U Test result statistically showed that there was a significant difference between the post-test result in the intervention group and the control group.

Table 2: Statistical Results for Attitude

Attitude level category	Intervention Group				Control Group			
	Pretest		Posttest		Pretest		Posttest	
	Σ	%	Σ	%	Σ	%	Σ	%
Positive	12	60	13	65	12	60	8	40
Negative	8	40	17	35	8	40	10	50
Total	20	100	20	100	20	100	18	90
Wilcoxon Signed Ranks Test	p = 0.001				p = 0.021			
Mann-Whitney U Test	p = 0.000							

Table 2 showed that there were differences in attitude between the intervention and control groups. The results of the Wilcoxon signed rank test in the intervention group showed p-value = 0.001, which means that there was a difference between the attitude before and after the intervention. The results of the Wilcoxon signed rank test in the control group showed p-value = 0.021, which means there was a difference between the attitude before and after the intervention. The Mann Whitney U Test result statistically showed that there was a significant difference between attitude post-test in the intervention group compared to the control group.

Table 3: Statistical Results for Practice

Practice level category	Intervention Group				Control Group			
	Pretest		Posttest		Pretest		Posttest	
	Σ	%	Σ	%	Σ	%	Σ	%
Good	0	0	17	85	0	0	0	0
Enough	0	0	1	5	0	0	0	0
Less	20	100	2	10	20	100	18	90
Total	20	100	20	100	20	100	18	90
Wilcoxon Signed Ranks Test	p = 0.000				p = 0.180			
Mann-Whitney U Test	p = 0.000							

Table 3 showed that there were differences in practice between the intervention and control groups. The results of the Wilcoxon Signed Rank Test in the intervention group showed p-value = 0.000, which means that there was a difference between practice before and after the intervention. The results of the Wilcoxon Signed Rank Test in the control group showed p-value = 0.18, which means that there is no difference between the practice before and after the intervention. The Mann Whitney U Test result statistically showed that there was a significant difference between the practice in the post-test result in the intervention group compared to the control group.

Discussions

The influence of SEM and the Demonstration Method on Knowledge of Wound Care: The level of knowledge of the intervention group respondents in the pre-test was mostly in the sufficient category, and there were still those in the lower category. The results of the post-test focused on knowledge showed that more than half were in the good category and that none were in the lesser category. According to Metode Brances terhadap Peningkatan Pengetahuan, Sikap, dan Praktik Perawatan Anak Usia Sekolah, the level of knowledge

of the students after being given health education was better than before being they had been given health education.¹¹ Starting from giving the stimulus through vision, hearing, the child knows about the information and it is then processed in the brain so then they are able to recall the material. Based on this study, the majority of the respondents experienced an increase in knowledge but 2 of the respondents were found to have a steady level of knowledge. This is because of the ability to process information and because each child remembers the material differently. The two respondents who remained at the same level of knowledge were caused by them not focusing when the health education activities were given.

The control group in the pre-test for knowledge obtained the most data, which was in the sufficient category. After the post-test, it was still the same, namely in the sufficient category. There were 2 respondents from the control group who were declared as having dropped out because they did not attend the post-test. The control group had no increase in knowledge even though they had been given a leaflet. According to the study by Elvina, health education and leaflet administration could increase the knowledge of preventing asthma suffering in asthmatics.¹² The results of this study were not in accordance with the previous studies. There was no difference in knowledge between the pre-test and post-test in the control group because the researcher gave the leaflet to the respondents without there being any information on injuries and wound care. The control group was not given any health education, and they were only given leaflets without any information about injuries. The content of the leaflet was only a question about whether there has ever been counseling provided about injuries, how to program the School Health Unit, and questions about the doctor.

The influence of SEM and the Demonstration Method on the Attitude to Wound Care: The results showed that not all of the respondents in the intervention group had a positive attitude in the pre-test. The intervention showed the results of an increase in the attitude of the respondents in the intervention group. The results of this study support the theory of Lawrence Green (1991) in which he states that health education can influence the predisposing factors involved, namely attitude, where the predisposing factor can lead to changes in a person's behavior.¹³ Education is a system that has an influence on the formation of attitude because it can lay the foundation of understanding and moral concepts in individuals.

The results of the control group showed that more than half of the respondents had a positive attitude in the pretest stage. The results of the post-test attitude in the control group showed that the respondents still had a negative attitude. The results in the control group were almost the same as those of the intervention group. The research by Maulana, stated that attitude is not innate and that it can be formed through experience.¹⁴ Health education using Short Education Movies can be given twice to provide effectiveness to the students in remembering the material provided.¹⁵ This study is in accordance with the previous studies regarding the effect of health education on attitude. However, when the intervention and control groups were compared, there was no difference. This is because attitudes are difficult to change in a short time. Changing an attitude takes a long time and repetitive intervention.

The factors that can affect the outcome of the data is the factor of the facilitator in stating that the communication was not adequate enough to deliver the information to the respondents. This is a weakness in this study.

The influence of SEM and the Demonstration Method on the Practice of Wound Care: The practical for the intervention group respondents, when the pretest time care was obtained, showed that all of the intervention groups had fewer practice categories. The results of the intervention group's post-test were mostly in the good category, as there was a good increase in the scores. The results of this study supported the theory of Lawrence Green (1991)¹³ which states that health education can influence predisposing factors, namely the practice where such predisposing factors can lead to changes in a person's behavior. This study is consistent with research Sauerberger and Kawuriansari, who conveyed about health education that has a positive relationship with knowledge and practice (actions), where if knowledge and practice can be maintained it will lead to consistent behavior.^{16,17}

The control group showed there to be no difference in the pre-test and post-test values because the leaflets provided did not contain information about injuries. There were differences in the behavior of the intervention and control groups. According to Media Leaflet dalam Pembelajaran, they stated that the weaknesses of the leaflet media is that the media cannot stimulate sound effects and motion effects, and that they are easily

folded.¹⁸ Leaflets are less attractive than movies. The researcher only provided leaflets without any information about injuries, so the leaflets contained only the effects of the placebo.

Conclusion

SEM and the demonstration method influences the increase in knowledge, attitude and practices of minor wound care in school-age children. The respondents, after being given the intervention, will get better care information so as to increase their knowledge. Although difficult attitudes can be changed in a short time, the results of the data showed that the intervention can improve the attitude of the respondents for the better. Practice can bring the respondents 'real' situations so then the respondents can see, hear and increase their skill at treating minor first aid injuries. Further researchers are advised to compare the effectiveness of the demonstration method combined with Short Education Movie media with more methods and media in order to obtain better health education methods for school-age children.

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